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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,658	07/25/2001	Gundu M. Sabde	500163.04	9163

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EXAMINER

CHEN, KIN CHAN

ART UNIT PAPER NUMBER

1765

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	09/915,658	SABDE ET AL.	
	Examiner	Art Unit	
	Kin-Chan Chen	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 53-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-59 is/are rejected.
- 7) ☒ Claim(s) 57 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01202004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 57 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 57 recites 'comprises polyvinyl alcohol' which is not in the base claim 53.

Claim Rejections - 35 USC § 112

2. Claims 53-59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 53, line 5, since "greater than" and "approximately" define two different possible ranges, the above phrase renders the scope of the claims unclear.

The court held that claims reciting "at least about" and "greater than about" were invalid for indefiniteness where there was close prior art and there was nothing in the specification, prosecution history, or the prior art to provide any indication as to what range of specific activity is covered by the term "about". *Amgen v. Chugai Pharmaceutical Co. Ltd.*, 927 F.2d 1200, 18 USPQ2d 1016 (Fed. Cir. 1991).

"approximately" is analogous to "about". Therefore, it is indefinite.

Claims 58 and 59 contain the trade names / trademarks "CARBOPOL" and "POLYOX". Where a trade name /trademark is used in a claim as a limitation to identify

or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trade name / trademark cannot be used properly to identify any particular material or product. A trade name / trademark is used to identify a source of goods, and not the goods themselves. Thus, trade name does not identify or describe the goods associated with trade name. Accordingly, the identification/description is indefinite.

Claim 57 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 57 recites the limitation " the lubricant additive comprises polyvinyl alcohol" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 53-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruxvoort et al. (US 5,958,794; hereinafter "Bruxvoort").

Bruxvoort teaches a lubricating planarizing solution. A non-abrasive solution without abrasive particles may be ammonium hydroxide (so-called water and ammonia in the instant claims), see col. 12, lines 44-50. A lubricant-additive may be mixed with the non-abrasive solution. Bruxvoort discloses that the lubricant-additives may include various popular (well-known) lubricants **and the like** (col. 13, lines 12-30). Bruxvoort discloses that the lubricant-additives may include polyvinyl alcohols, glycerine (is also known as glycerin or glycerol, see Alban et al. (US 5,380,528) in the record as evidence). Bruxvoort also discloses that the lubricant-additives may include POLYOX which contains polyethylene glycol (see Sung Ki Lee (US 3,617, 320) in the record as evidence). Because Bruxvoort discloses that the lubricant-additives may include polyethylene glycol, glycerol **and the like**. Therefore, it would have been obvious to one with ordinary skilled in the art that the polypropylene glycol is included because they are all polyhydric alcohols and they have similar lubricating characteristics. Therefore, Bruxvoort teaches the claimed lubricant additives.

Bruxvoort does not disclose the viscosities of the non-abrasive solution, lubricant-additive, and lubricating planarizing solution being used in the composition. The claimed invention differs from Bruxvoort by specifying the viscosity of the non-abrasive solution, lubricant-additive, and lubricating planarizing solution. However, the concentration and composition of each ingredient in the solution is commonly determined by routine experiment. The process of conducting routine optimizations so as to produce an expected result is obvious to one of ordinary skill in the art. In the absence of showing criticality or new, unexpected results, it is the

examiner's position that a person having ordinary skill in the art at the time of the claimed invention would have found it obvious to perform routine experiments by using various compositions with various viscosities in order to reduce the friction between the fixed abrasive article and the semiconductor wafer surface during the planarization and provide the satisfactory planarization.

Changes in compositions, temperature, concentrations, or other process conditions of a process do not impart patentability unless the recited ranges are critical (i.e., they produce a new and unexpected result that differs in kind and not merely in degree from the result of the prior art). *In re Woodruff*, 16USPQ2d 1934,1936 (Fed. Cir.1990); *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809; *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). MPEP 2144.05 IIA. The burden is on the applicant to establish with objective evidence that the change is critical.

Response to Arguments

5. Applicant has argued that the prior art has a list of lubricants. It is not persuasive. In fact, the application has a list of lubricants. What is critical is Bruxvoort teaches composition comprising the lubricants as instantly claimed.

Applicant has argued that Bruxvoort provides no teaching or suggestion that viscosity is an issue to consider. In response, as stated in the office action, the concentration and composition of each ingredient in the solution is commonly determined by routine experiment. The process of conducting routine optimizations so

as to produce an expected result is obvious to one of ordinary skill in the art. In the absence of showing criticality or new, unexpected results, it is the examiner's position that a person having ordinary skill in the art at the time of the claimed invention would have found it obvious to perform routine experiments by using various compositions with various viscosities in order to reduce the friction between the fixed abrasive article and the semiconductor wafer surface during the planarization and provide the satisfactory planarization. the disclosure does not show **the criticality** of the claimed range by showing the claimed range **achieving unexpected results relative to outside the claimed range .** The burden is on the applicant to establish with objective evidence that the change is critical.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Alban et al. (US 5,380,528; col. 4, lines 26-27) shows that glycerine is also known as glycerin or glycerol. Sung Ki Lee (US 3,617,320; col.7, line 55) shows that POLYOX which contains polyethylene glycol. Reidmeyer (US 6,291,407) shows polyhydric alcohols such as glycerol, propylene glycol, ethylene glycol (col. 5, lines 33-35).

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kin-Chan Chen whose telephone number is (571) 272-1461. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 22, 2004

A handwritten signature in black ink, appearing to read "K. C. Chen", with a large, sweeping flourish extending to the right.

Kin-Chan Chen
Primary Examiner
Art Unit 1765

K-C C